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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,437	12/28/2001	Keith A. Riha	TRM TR000024 DIV	9561
32047 7590 07/03/2007 GROSSMAN, TUCKER, PERREAULT & PFLEGER, PLLC 55 SOUTH COMMERICAL STREET MANCHESTER, NH 03101			EXAMINER DANIELS, MATTHEW J	
			ART UNIT 1732	PAPER NUMBER
			MAIL DATE 07/03/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/033,437	Applicant(s) RIHA ET AL.	
	Examiner Matthew J. Daniels	Art Unit 1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This application has been transferred to Matthew J. Daniels.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 17 April 2007 has been entered. In this submission, Claim 1 was amended.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Filion *et al.* (US Patent No. 5,952,630) in view of Welz *et al.* (US Patent No. 5,630,979).

Filion *et al.* ('630) teach the basic claimed process including, providing a flexible (deformable) thermoplastic PVC (polymer) outer skin (26b') (see col. 3, line 63) formed by vacuum forming (thermoforming) (col. 5, lines 56-57), a foam layer (26b'') bonded to said skin,

Art Unit: 1732

a substrate layer (22b) bonded to said foam layer (26b”) and at least one switch (30b) embedded in said foam layer (26b”) that is force activated (see Figure 5 and, col. 3, lines 60-64; col. 5, lines 31-34 and lines 54-61; col.6, lines 20-21). Further, Filion *et al.* (‘630) specifically teach that *any* (emphasis added) suitable foam material may be used as taught in U.S. Patent No. 5,232,957, which is incorporated by reference (col. 6, lines 1-7), and as such, under MPEP §2163.07, Filion *et al.* (‘630) suggests a polyurethane foam. Also note that Filion *et al.* (‘630) incorporates by reference USPN 5,340,149 at Col. 4, line 1, which specifically teaches urethane foam at Col. 2, line 11-12. Further, Filion *et al.* (‘630) specifically teach other “any number of known materials...described in U.S. Patent Nos. 5,448,028...”, which is incorporated by reference (col. 6, lines 1-7), and as such, under MPEP §2163.07, Filion *et al.* (‘630) teach a thermoplastic olefin or urethane for making the flexible, outer skin (26b’) (see col. 3, lines 1-19 of U.S. Patent Nos. 5,448,028). Furthermore, Filion *et al.* (‘630) teach marking of said outer skin layer (see Figure 1). As to the claim amendments presented in the 17 April 2007 reply, Filion *et al.* (‘630) incorporate by reference USPN 5,448,028 to Filion *et al.* (‘028) at Col. 4, line 1. Filion *et al.* (‘028) teach one or more membrane switches (Fig. 1) which include switch arms (Fig. 2, item 34) capable of engaging electrical connectors (40, 44, 42, 38), wherein upon application of a force the skin layer deforms to enable the switch arm to contact the electrical connectors (implicit). It is noted that at least Filion *et al.* (‘028) teach that a marking is placed on the skin (“MIRROR” in Fig. 1).

Regarding claim 1, although Filion *et al.* (‘630) teach a flexible (deformable) thermoplastic PVC (polymer) outer skin (26b’), Filion *et al.* (‘630) does not teach that said skin is colored. However, making a colored flexible (deformable) thermoplastic skin is well known.

Art Unit: 1732

Therefore, it would have been obvious for one of ordinary skill in the art to provide a colored thermoplastic skin layer in the process of Filion *et al.* ('630) because of known advantages that color provides such as improved aesthetics, hence providing for an improved product.

Further regarding claim 1, although Filion *et al.* ('630) teaches marking of said outer skin layer (see Figure 1), Filion *et al.* ('630) do not teach a process of marking said outer skin layer using a laser. However, laser marking a thermoplastic material is well known as evidenced by Welz *et al.* ('979) who teach in general using a laser beam to form a mark on a plastic substrate that includes a commercially available pigment which under the influence of the laser light is bleached (causes color to bleach...relative to a portion...not contacted by said laser) (see col. 2, lines 13-18). Therefore, it would have been obvious for one of ordinary skill in the art to have used a laser beam as taught by Welz *et al.* ('979) to mark the thermoplastic material in the process of Filion *et al.* ('630) because, Welz *et al.* ('979) teach that laser marking is well known for quickly and cleanly inscribe colored (pigment) thermoplastic materials such as is the thermoplastic material of Filion *et al.* ('630), hence providing for an improved process.

Response to Arguments

4. Applicant's arguments filed 17 April 2007 have been fully considered but they are not persuasive. The arguments appear to be on the following grounds:

a) Welz does not teach the specific features now claimed.

Art Unit: 1732

5. These arguments are not persuasive for the following reasons:

a) The claimed switch having a switch arm capable of engaging electrical connectors is disclosed in USPN 5448028, incorporated by reference into the base reference (USPN 5952630). The '028 reference also suggests inscriptions or other indicia to provide the function of the switch, as provided by Welz.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Daniels whose telephone number is (571) 272-2450. The examiner can normally be reached on Monday - Friday, 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Matthew J. Daniels

A.U. 1732
29 June 2007